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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,855	03/29/2005	Nicola Da Dalt	10808/172	6363

7590 01/18/2007
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EXAMINER

ARENA, ANDREW OWENS

ART UNIT	PAPER NUMBER
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'2811

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/511,855

Applicant(s)

DA DALT, NICOLA

Examiner

Andrew O. Arena

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-21 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date Oct 16 2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/2006 has been entered.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hu (US 6,743,671).

Re claim 1, Hu discloses (Figs 4 & 5; col 3 ln 17- col 4 ln 10) a semiconductor component comprising:

a semiconductor substrate (col 3 ln 20-21) having an insulating layer (45; col 28-29) on the semiconductor substrate surface and having a capacitance structure (40) in the insulating layer, wherein the capacitance structure comprises:

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a first substructure (411b; col 3 ln 63-64) which has a first cohesive latticed metal region including crossing metal leads (41: Fig 4, upper left corner of Fig 5) which extends in a first common plane parallel to the substrate surface such that it has common top and bottom surfaces which limit the first cohesive latticed metal region in each of its subregions from above and from below,

wherein the first cohesive latticed metal region is electrically connected to a first connecting line (A; col 3 ln 35-39, ln 59-61); and

electrically conductive regions (421b; col 3 ln 66 – col 4 ln 1) arranged in openings in the first cohesive latticed metal region (Fig 4) of the first substructure at a distance from edge regions of the openings in the common plane,

wherein the crossing metal leads have a width less than or equal to the distance between the edge regions of the openings and the electrically conductive regions (Fig 4) and,

wherein the electrically conductive regions are electrically connected to a second connecting line (B; col 3 ln 35-39, ln 59-61), and wherein the electrically conductive regions comprise metal plates between via connections.

Re claim 2, Hu discloses (Figs 4 & 5; col 3 ln 17- col 4 ln 10) a second substructure parallel to and at a distance from the first substructure wherein the second substructure comprises:

a second cohesive latticed metal region (411a) including crossing metal leads which extends in a second common plane parallel to the substrate surface such that it

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has common top and bottom surfaces which limit the second latticed metal region in each of its subregions from above and below; and

electrically conductive regions (421a),

wherein the first and second substructures are electrically connected by the first and second connecting lines (col 3 ln 35-39, ln 59-61).

Re claim 7, Hu discloses (Fig 5) a metal plate (43; col 4 ln 20-22) electrically connected to one of the crossing points of the metal leads in a the cohesive latticed metal region of the first substructure and to the electrically conductive regions of the second substructure by means of one or more respective via connections (electrical connection is interpreted to encompass capacitive coupling – see MPEP § 2111).

Re claim 8, Hu discloses (Fig 4) wherein the first cohesive latticed metal region has at least two square or round openings (shape not limited to rectangle, disclosure encompasses all common shapes: col 3 ln 45-49, col 5 ln 9-14).

Re claim 9 Hu discloses the first and second connecting lines are at different electrical potentials (A & B, respectively: col 3 ln 35-39, ln 59-61).

Re claim 10, Hu discloses a first non-parasitic capacitance exists between the cohesive latticed metal region of the first substructure and a second non-parasitic capacitance exists between the first and second connecting lines, and wherein the magnitude of the first non-parasitic capacitance differs from the magnitude of the second non-parasitic capacitance (inherent in structure - see MPEP § 2112.01).

Allowable Subject Matter

Claims 11-21 are allowed.

Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable subject matter has been indicated because the references of record, alone or in combination, do not teach or suggest at least:

wherein the crossing metal leads have a width less than or equal to the distance between the edge regions of the openings and the electrically conductive regions and the first and second substructures are laterally offset from one another; as required by dependent claims 3 & 5 and independent claims 11 & 16; or

wherein the crossing metal leads have a width less than or equal to the distance between the edge regions of the openings and the electrically conductive regions and crossing points in one substructure are connected to electrically conductive regions of another substructure by at least one via; as required by dependent claims 4 and 6.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuo (US 6,974,994) discloses applicant's claimed invention (e.g., Fig 4), but is not available as prior art.

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Soenen (US 6,963,122), Sakaguchi (US 2006/0086965), Ota (US 2006/0226462), and Hayashi (US 7,072,169) disclose inventions very similar to applicant's claimed invention but are not prior art.


Chakravorty (US 6,970,362), Sowlati (US 6,410,954) and (US 6,570,210), and Sudo (US 5,475,264) are background prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew O. Arena whose telephone number is 571-272-5976. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard T. Elms can be reached on 571- 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8 January 2007
Andrew O Arena



DOUGLAS W. OWENS
PRIMARY EXAMINER